

## ABSTRACT

The present invention allows an item to automatically be classified using its attributes based on a classification schema and a knowledge base. The invention can include selecting a first attribute of the item, comparing the value of the first attribute of the first item to a set of possible attribute values, the possible attribute values being associated respectively, with item classifications, selecting at least one item classification for the first item based on the comparison, and determining a confidence score for each item classification for the item. The invention further includes selecting a second attribute of the first item if one selected item classification does not have a sufficiently high confidence score, comparing the value of the second attribute of the first item to a set of possible second attribute values, the possible second attribute values being associated, respectively, with item classifications, selecting at least one item classification for the first item based on the second comparison, and determining a confidence score for each selected item classification of the second comparison.